the common ancestor to be a therapsid reptile and not a mammal. He also includes the superfamilies Ceboidea, Cercopithecoidea, and Hominoidea in the suborder Anthropoidea, although he recognizes the independent origin of the Old World and New World monkeys from a prosimian base. The taxons Mammalia and Anthropoidea as used by Simpson seem to rest upon analogies and diphyletic origins and therefore to be in need of taxonomic revision at the higher category level.

If these differences of opinion were merely arbitrary and concerned the classification and naming of a few groups of animals of interest to a small number of specialists, the matter would not be of great import, but basic principles of biology are involved. Sufficient evidence is available to indicate that more strict definitions of homology, and parallel evolution would provide better correlations of taxonomic and evolutionary order.

Scholarly Approach to Taxonomy

In spite of these criticisms, it is my sincere opinion that this book marks an important advance in taxonomic theory. The result of mature experience in the taxonomy of both fossil and living mammals, it represents a fine scholarly approach to a science that is essential to all comparative biology. Even its ambiguities and inadequacies will set the stage for more critical tests of important hypotheses and interpretations in the near future. All biology will progress as the result of the balanced integration of modern taxonomy within the life sciences.

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Handbook of Abnormal Psychology. An experimental approach. H. J. Eysenck, Ed. Pitman, London; Basic Books, New York, 1961. xvi + 816 pp. Illus. $18.

In this book we have clear indications of how a new, vital discipline has finally evolved into a distinct species and of how it is beginning to find its own place among disciplines of similar genre. As in the case of all historical emergents, it is bound to influence related disciplines in some degree, giving advantage to some and perhaps hastening the modification or disappearance of others as it struggles to survive and grow.

The chapters have their roots in and represent a special focus of experimental psychology. Abnormality is defined not in terms of people suffering from mental disease produced by "definite" causes, but in terms of the defective functioning of various psychological systems. The psychiatric framework is rejected outright. Chapter headings found in textbooks of recent vintage—such as "The neuroses," "Amnesia," "Disordered emotion," "Disorders of volition," and the like—have given way to chapters entitled "Somatic reactivity," "Conditioning," "Learning and abnormal behavior," "Abnormal animal behavior," and "Applied abnormal psychology: the experimental approach." Throughout the book, there is a deliberate effort to avoid the concepts, nosology, and clinical observations of both descriptive and dynamic psychiatry and also, to some extent, the literature on multifactorial tests such as the Rorschach, Thermatic Apperception Test, and even the Wechsler intelligence scales. Instead there is a common effort to base all topical reviews on laboratory findings and sound statistical analysis.

The reader, however, should not expect to find many signs of maturity in this young field, apart from some methodological and orientational ones. There is still no body of accepted theory which can come close to unifying the wide, varied literature reviewed.

The theories which are found are primarily those of Hull, Pavlov, and Eysenck. The latter's theoretical formulations are represented out of all proportion to what would be the case if a similar book were compiled in this country, primarily because the authors of the various chapters are mostly his students and colleagues. The treatments of some of the topics are narrower in their outlook than they should be and statements are sometimes offered as fact although they represent still unsettled issues, but the level of the work is uniformly high. Two of the chapters should not have been included at all. The controversial quality of some of the discussions clearly reflects the youth of the subject, but it also indicates the subject's vitality and sense of purpose.

Eysenck asks, "What is a handbook?" And he answers: "A handbook is what a handbook does." What this handbook does is to renounce its psychiatric heritage, to proclaim abnormal psychology as a legitimate offspring of experimental psychology, and to point the direction in which the field must grow. As a single reference and source book of abnormal psychology, it now stands by itself, but before very long we can expect others in this same experimental vein with different emphasis and with more complete development of most of the topical areas.

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Structure and Function of Muscle. vol. 1, *Structure.* 472 pp. $14. vol. 2, *Biochemistry and Physiology.* 593 pp. $16.50. vol. 3, *Pharmacology and Disease.* 489 pp. $15. Geoffrey H. Bourne, Ed. Academic Press, New York, 1960. Illus.

In the not too distant past, the publishing of multivolume handbooks was a specialty of the German scientific world, but it seems that this has now become an American occupation. It is hard to say whether we make them bigger and better, but surely many of them have recently been devoted to various biochemical and other biological subjects, and indeed they form most valuable additions to institutional and departmental libraries.

The work under discussion is not specifically called a "handbook," although it is one because of the breadth of its scope. Its virtues: in three well-executed volumes of not excessive size, it gives a cross section through the field of myology. To various degrees (some special comments follow), the individual chapters are well-rounded and mostly very readable, so that anyone who studies the entire work (which is perfectly possible) will acquire a great deal of knowledge. Its weakness: so much is missing that such an eager reader will still have to supplement his reading to a significant extent if he wishes to be in contact with the major problems, and not all of this additional material is easily accessible. It would have been better, strange to say, if the work had been expanded somewhat to cover some additional topics.

This mild criticism must be substantiated, so let us proceed. There is a lucid over-all review of the biochemistry of muscular action by D. M. Needham and an outstanding chapter on the biochemistry of the sarcosomes by Slater,